operating frequency is within a predetermined band around a nominal operating frequency; and

transferring energy between the energy storage device and the electricity grid to bring the SOC within said predetermined limits when the operating frequency is within said predetermined band and the SOC of the energy storage device is outside said predetermined limits.

11. The method of claim **10**, wherein said parameter is the instantaneous value of the operating frequency.

12. The method of claim **11**, wherein said predetermined band is equal to said predetermined range.

13. The method of claim **11**, wherein said predetermined band is smaller than said predetermined range.

14. The method of claim **10**, wherein said parameter is the rate of change of the operating frequency.

15. A system for responding to changes in the operating frequency of an electricity distribution grid, comprising:

a least one energy storage device;

a converter that, in response to a command to add energy to or absorb energy from the grid, selectively couples said storage cell to the grid to transfer energy between the energy storage device and the grid; and

a state-of-change (SOC) maintenance system that determines whether the operating frequency of the electricity grid is within a predetermined range of a nominal operating frequency, determines whether the SOC of the energy storage device is within predetermined limits, and controls said converter transfer energy between the energy storage device and the electricity grid to bring the SOC within said predetermined limits when the operating frequency is within said range and the SOC of the energy storage device is outside said predetermined limits.

16. The system of claim **15**, wherein said SOC maintenance system includes a transducer that provides data pertaining to the operating frequency of the grid.

17. The system of claim **15**, wherein said SOC maintenance system includes a controller that instructs the converter to connect and disconnect the energy storage device and the grid.

18. The system of claim **17**, wherein said controller instructs the converter to transfer energy at a designated rate.

19. The system of claim **18**, wherein the controller instructs the converter to transfer energy between the grid and the energy storage device at a rate that is based upon the SOC.

20. The system of claim **18**, wherein the controller instructs the converter to transfer energy between the grid and the energy storage device at a rate that is based upon the operating frequency of the grid.

21. The system of claim **20**, wherein said rate is a non-linear function of the operating frequency of the grid.

22. The system of claim **21**, wherein said non-linear function is a polynomial of an order higher than one.

23. The system of claim **18**, wherein the controller instructs the converter to transfer energy between the grid and the energy storage device at a rate that is based upon the capacity of the energy storage device.

24. The system of claim **17**, further including a storage cell management system that provides data to the controller pertaining to the state of charge of the energy storage device.

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